

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1 and 3-14 are pending in the present application. Claim 1 is amended by the present amendment.

In the Advisory Action, the Amendment filed June 19, 2003, was entered and Claims 1 and 3-14 were rejected for the same reasons made of record in the Office Action of March 19, 2003. In the Office Action of March 19, 2003, Claims 3 and 10-12 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-7 and 9-13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita et al. (U.S. Patent No. 4,687,712, herein “Sugita”) in view of Hokkyo et al. (U.S. Patent No. 6,387,483 B1, herein “Hokkyo”) and Michaelsen et al. (U.S. Patent No. 4,245,008, herein “Michaelsen”); Claim 8 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita in view of Hokkyo and Lal et al. (U.S. Patent No. 5,834,111, herein “Lal”); and Claim 14 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita in view of Hokkyo and Kanbe et al. (U.S. Patent No. 6,221,508 B1, herein “Kanbe”).

Regarding the rejection of Claims 3 and 10-12 under 35 U.S.C. § 112, second paragraph, Applicant respectfully submits that this rejection is moot in view of the Amendment filed on June 19, 2003.

Independent Claim 1 is herein amended to recite that “each of said at least two soft magnetic layers having a thickness that prevents a non-uniformity of a crystal structure,” as disclosed in the specification at page 9, line 29, to page 10, line 22. No new matter has been added.

Claims 1-7 and 9-13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita in view of Hokkyo and Michaelsen. That rejection is respectfully traversed.

Amended Claim 1 is directed to a magnetic recording medium having a non-magnetic substrate, at least two soft magnetic layers divided by a separate layer, and at least one magnetic recording layer formed on the substrate via the at least two soft magnetic layers. Each of the at least two soft magnetic layers has a thickness that prevents a non-uniformity of a crystal structure.

As disclosed in the specification, Applicant recognized that a drawback in background art results in producing a poor surface roughness of a magnetic recording medium by virtue of a non-uniform crystal structure of the soft magnetic layer of the magnetic recording medium.¹ Further, Applicant identified that the non-uniformity of the crystal structure of the soft magnetic layer can be prevented by limiting a thickness of the soft magnetic layers of the magnetic recording medium. Accordingly, it is respectfully submitted that Applicant has identified and solved a problem of the background art, which remained unsolved until Applicant first identified and then solved the problem. Further, the claimed magnetic recording medium solves the problem of the background art by requiring that each of at least two soft magnetic layers has a thickness that prevents a non-uniformity of a crystal structure.

Sugita shows in Figures 8-10 three soft magnetic layers 14 separated by Ti films 15 and a magnetic layer 2. However, Sugita does not teach or suggest that each of at least two soft magnetic layers has a thickness that prevents a non-uniformity of a crystal structure.

Hokkyo shows in Figure 2 a Cr layer 114 added underneath of a soft magnetic layer 116 and a recording magnetic layer 118 to improve a surface roughness. However, Hokkyo

¹ Specification, page 10, lines 2-8.

does not teach or suggest at least two soft magnetic layers, each of the at least two soft magnetic layers having a thickness that prevents a non-uniformity of a crystal structure.

Michaelsen is asserted for teaching various features of the depending claims.

However, Michaelsen does not overcome the deficiencies of Sugita and Hokkyo discussed above. Accordingly, it is respectfully submitted that independent Claim 1 and each of the claims depending therefrom patentably distinguish over Sugita, Hokkyo, and Michaelsen.

Claim 8 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita in view of Hokkyo and Lal. That rejection is respectfully traversed.

Lal does not cure the deficiencies above-discussed regarding independent Claim 1. Because Claim 8 depends on independent Claim 1, which is believed to be allowable, it is respectfully submitted that Claim 8 patentably distinguishes over Sugita, Hokkyo, and Lal.

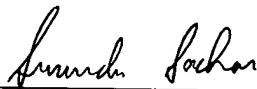
Claim 14 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sugita in view of Hokkyo and Kanbe. That rejection is respectfully traversed.

The outstanding Office Action relies on Kanbe for teaching a magnetic recording apparatus. However, Kanbe does not cure the deficiencies noted above regarding independent Claim 1. Because Claim 14 depends on independent Claim 1, which is believed to be allowable, it is respectfully submitted that Claim 14 patentably distinguishes over Sugita, Hokkyo, and Kanbe.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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